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Title: **JP11238518A2: NONAQUEOUS ELECTROLYTE BATTERY**

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Country: **JP Japan**

Kind: **A**

Inventor(s): **TERASAKI MASANAO**

Applicant/Assignee: **JAPAN STORAGE BATTERY CO LTD**



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Issued/Filed Dates: **Aug. 31, 1999 / Feb. 20, 1998**

Application Number: **JP1998000055872**

IPC Class: **H01M 6/16; H01M 2/12; H01M 2/34; H01M 10/40;**

Priority Number(s): **Feb. 20, 1998 JP1998199855872**

Abstract:



Problem to be solved: To provide a battery in which hydrogen gas is not generated, even if the air penetrates into its nonaqueous electrolyte by arranging an insulating liquid that does not have compatibility with the nonaqueous electrolyte and water on the upper part of the nonaqueous electrolyte.

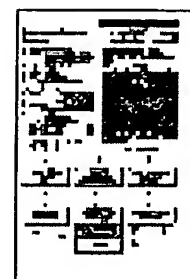
Solution: A rupture disc 6 is, for instance, a stainless steel plate having a thickness of 0.2 mm and is an inside pressure releasing mechanism to be ruptured by a pressure above a specified pressure, when the inside pressure is abnormally increased by gas generation and temperature rise due to overcharging, large current discharge or the like. If the rupture disc 6 is broken, the vapor of the gas and the electrolyte inside a battery is released to the outside, and at the same time, the outside air also intrudes into the battery, the water vapor in the outside air reacts with a negative electrode and generates heat, hydrogen gas is generated, and the temperature of the battery is increased. Then, the inside of the battery is filled with the hydrogen gas and is brought into a hazardous condition. A fluid paraffin 7 that is used to prevent this is not compatible with water, is an insulating liquid having a specific gravity smaller than that of a nonaqueous electrolyte, is floating on the upper part of the nonaqueous electrolyte 3 in the form of a layer, and prevents the generation of the hydrogen gas.

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Other Abstract Info: **CHEMABS 131(13)172681N CHEMABS 131(13)172681N DERABS**



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PATENT ABSTRACTS OF JAPAN(21) Application number: **10055872**(51) Intl. Cl.: **H01M 6/16 H01M 2/12 H01M 2/34 H01M 10/40**(22) Application date: **20.02.98**

(30) Priority:

(43) Date of application
publication: **31.08.99**(84) Designated contracting
states:(71) Applicant: **JAPAN STORAGE BATTERY CO
LTD**(72) Inventor: **TERASAKI MASANAO**

(74) Representative:

**(54) NONAQUEOUS
ELECTROLYTE BATTERY**

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a battery in which hydrogen gas is not generated, even if the air penetrates into its nonaqueous electrolyte by arranging an insulating liquid that does not have compatibility with the nonaqueous electrolyte and water on the upper part of the nonaqueous electrolyte.

SOLUTION: A rupture disc 6 is, for instance, a stainless steel plate having a thickness of 0.2 mm and is an inside pressure releasing mechanism to be ruptured by a pressure above a specified pressure, when the inside pressure is abnormally increased by gas generation and temperature rise due to overcharging, large current discharge or the like. If the rupture disc 6 is broken, the vapor of the gas and the electrolyte inside a battery is released to the outside, and at the same time, the outside air also intrudes into the battery, the water vapor in the outside air reacts with a negative electrode and generates heat,

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